

Locomotive Digital Video Recording System

Maintenance Programs and Practice

SAE/NTSB 2003 Recorder
Symposium

Alexandria, Virginia

June 5, 2003

Load Data

c:\Presentation\RV307H_11142002_1437.bin



7: 11/14/2002 14:41:48 - 14:42:54 = 0h 01m 06s



PC

HORN

FWD

35 mph

11/14/2002 14:42:22

Video Step Interval



- 1/4 sec/frame
- 1/2 sec/frame
- 1 sec/frame
- 2 sec/frame
- 5 sec/frame
- 10 sec/frame
- 30 sec/frame
- 1 min/frame
- 2 min/frame
- 5 min/frame
- 10 min/frame

Enhance
Images

Save Image

RV Offline

Unit #307



Start Capture

“RailView” System

- What is a locomotive digital video recording system (LDVRS) or “RailView” system?

Recorder Mounting Location



Recorder Mounting Location



Recorder Mounting Location



Recorder Mounting Location



Camera Mounting Location



Camera Mounting Location



System I/O's

- Inputs:
 - Horn
 - Forward, neutral, reverse
 - “PC” (i.e. Emergency brake application)
 - Speed
 - Video
 - Audio
- Outputs:
 - Status indicators

Status Indicators

- System and Trouble Status:
 - L1 Steady Green: Ready to record data
 - L1 Flashing Green: Acquiring data
 - L2 Steady Red: System failure
 - L2 Flashing Red: Reduced system functions
 - L2 Dark: System OK

Status Indicators

- L3 Steady Green: Horn activated
- L4 Steady Green: Reverser thrown forward
- L5 Steady Green: Reverser thrown reverse
- L6 Steady Green: Reverser centered
- L7 Steady Green: PC activated
- L8 Steady Green: Speed input active

Load Data

d:\RV561H_02212003_1937.bin



1070 : 02/21/2003 19:37:00 - 19:39:02 = 0h 02m 02s



PC

0 mph

02/21/2003 19:39:02

Video Step Interval

- 1/4 sec/frame
- 1/2 sec/frame
- 1 sec/frame
- 2 sec/frame
- 5 sec/frame
- 10 sec/frame

RV Offline

Unit #561



Start Capture

Wayne, IL - Derailment

02/21/03 - 6:50 PM

- Direction - East
- Speed - 42 MPH
- Weather: Cloudy; Temp: 41°
- 2 Units, 32 Cars (34 Total)

Wayne Derailment



Wayne Derailment



Wayne Derailment



Wayne, IL - Derailment

- Cost: \$3.25 Million

New Dimension in Derailment Investigation

- Video from the engineer's view
- Distinct audio information